



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/396,407	09/15/1999	DAVID H. KOIZUMI	2207/6657	7402

7590 02/03/2006

JOHN C. ALTILLER
KENYON & KENYON
1500 K STREET, N.W.
WASHINGTON, DC 20005

EXAMINER

WERNER, BRIAN P

ART UNIT	PAPER NUMBER
----------	--------------

2621

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/396,407

Applicant(s)

KOIZUMI, DAVID H.

Examiner

Brian P. Werner

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the amendment and remarks received on December 28, 2005. Claims 6-30 remain pending.

Response to Arguments

2. Applicant's arguments filed on December 28, 2005 have been fully considered but they are not persuasive.

Embodiment of Armbruster (US 3,376,551 A) as depicted in figure 26

Claims 24 and 26 are rejected herein as being anticipated by Armbruster's embodiment of figure 26 (not 26a which is a different embodiment).

Summary of Applicant's Remarks: "The primary reference cited in the Office Action is Armbruster. In Armbruster, the ballpoint of the pen is magnetic in that it has distinct north and south poles. Movement of the ballpoint can be monitored and recorded. The ballpoint does not, however, apply a magnetic field to the ink (see Col. 33, lines 39-42)" at page 6, bottom paragraph of applicant's response.

Examiner's Response: Figure 26 depicts the ink 176 and magnetized ball 174 as the ink is being deposited on the surface during writing. The magnetic pattern of the ink once deposited

Art Unit: 2621

is dependent upon how the ball rotates during writing. That is, the ink is magnetized by the ball (which is a magnet) as the ink is being applied to the surface. Refer to “deposited by stroking the pen end in the usual fashion, it will be seen that as the ball 174 gyrates, it deposits ink in a distinctive magnetic pattern” at column 33, lines 1-3. While the ink is “magnetizable” at column 32, line 72, it does not become magnetized until it passes over the ball and onto the writing surface. Thus, Armbruster teaches the newly added claim limitation (i.e., claim 24) of “applying a varying magnetic flux to the magnetic ink ... as it is applied to the surface”.

Embodiment of Armbruster (US 3,376,551 A) as depicted in figure 26a

Claims 6, 12, 13, 15, 16, 17, 18, 24, 25, 27, 28 and 30 are rejected herein as being anticipated by Armbruster’s embodiment of figure 26a.

Summary of Applicant’s Remarks: “In Armbruster, the ballpoint of the pen is magnetic in that it has distinct north and south poles. Movement of the ballpoint can be monitored and recorded. The ballpoint does not, however, apply a magnetic field to the ink (see Col. 33, lines 39-42)” at page 6, bottom paragraph of applicant’s response.

Examiner’s Response: Agreed. In figure 26, the N and S poles in the ball tip are utilized to magnetize and encode the ink as it is applied to the writing surface. However, this is not the case in figure 26a. That is, in figure 26a the magnetic recording head 186 is responsible for

Art Unit: 2621

magnetizing the ink, where the “ink used in this modification is ... not too much effected by the flux of the ball 180 but more effectively controlled in the magnetic fashion by one or the other of the magnetic heads 185 and 186” at Armbruster column 33,line 43. Therefore, the fact that the ball tip of figure 26a has N and S poles is a moot point; as it is not at all relevant to the examiner’s application of the art to the claim.

Summary of Applicant’s Remarks: “Instead, a recording magnetic head 186 is positioned away from the ballpoint so as to sweep it over the drying ink (see Col. 33, lines 57-58). Thus, Armbruster specifically teaches applying a magnetic field to drying ink on a surface” at page 6, bottom paragraph of applicant’s response.

Examiner’s Response: Agreed. This is depicted in figure 26a, where magnetic ink 181 being deposited on the writing surface by ball tip 180 is simultaneously magnetized and encoded by record head 186.

Summary of Applicant’s Remarks: “It is noted that in Armbruster, the movement of the pen when applying ink to a surface is limited in that it must be brought from left to right in its current orientation so that the leading edge is erased by component 185 and the head 186 can act on the drying ink that gets through mask 183” at page 6, bottom paragraph of applicant’s response.

Art Unit: 2621

Examiner's Response: Disagreed. First, the "mask 183" is used in the embodiment described at column 33, lines 62+ for "CMC 7" encoding. However, the embodiment relied upon by the examiner begins at column 33, line 18 and ends at line 61. In this embodiment, a "mask 183" is not utilized. Rather, ink is deposited and then encoded by the write head in the absence of any mask, whereby "a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape" whereby "a number may be written in the Arabic notation but coded magnetically in a binary form" at column 33, lines 25-29. Again, a "mask" is not utilized in this embodiment. Second, the claims do not define any physical configuration of the record heads and the fact that Armbruster teaches a leading edge erase head and a trailing edge record head is not precluded by the claim language. For example, claim 6 requires:

A magnetic ink encoding stylus comprising:

a penpoint adapted to apply magnetic ink to a surface; and

a magnetic ink write head, coupled to the penpoint and to apply a varying magnetic flux to the magnetic ink as it is applied by the penpoint to the surface.

There is nothing in this claim, or any of the other pending claims that precludes the physical configuration of Armbruster figure 26a.

Art Unit: 2621

Summary of Applicant's Remarks: "The system of Armbruster is similar to the MICR system described in the Background section of the present application, in that after magnetic ink is applied to a surface, the ink is magnetized. Neither Armbruster nor the Background section teach or suggest applying a magnetic field to the ink as it is applied to the surface as recited in each of the pending claims" at page 6, bottom paragraph of applicant's response.

Examiner's Response: Disagreed. The magnetic ink of Armbruster is magnetized NOT after its application to the writing surface, but during its application to the writing surface. As depicted in figure 26a, as soon as the ink deposited by the ball 180 is magnetized by write head 186 during the same writing stroke made by the user. That is, the user NEED NOT first deposit the ink and then later retrace the ink to magnetize it. Rather, the ink is magnetized during the same writing operation that deposits the ink in the first place ("a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape" whereby "a number may be written in the Arabic notation but coded magnetically in a binary form" at column 33, lines 25-29). Not only is the Armbruster embodiment of figure 26a not precluded by any claim language, it functions in a manner analogous to applicant's disclosed invention. Applicant's specification page 5, lines 5-11 states (with emphasis added):

"A magnetic ink write head 203 including a magnetic coil surrounding a magnetically permeable core can provide a **magnetic field in the proximity of the penpoint** 202 that has the same modulation independent of the orientation of the pen about its central axis. **As the**

Art Unit: 2621

magnetic ink is deposited onto a surface by the penpoint 202, the magnetic ink is exposed to the time-varying magnetic field generated by the magnetic ink write head 203. The varying magnetic field created by the magnetic ink write head 203 interacts with the magnetic particles of the deposited magnetic ink to write a magnetic signal into the magnetic ink.

This is exactly how Armbruster works. That is,

Applicant discloses: a magnetic field in the proximity of the penpoint, and

Armbruster teaches a magnetic recording head comprising a coil and a magnet at numeral 186 in the proximity of the ball tip 180.

Applicant discloses that as the magnetic ink is deposited onto a surface by the penpoint 202, the magnetic ink is exposed, and

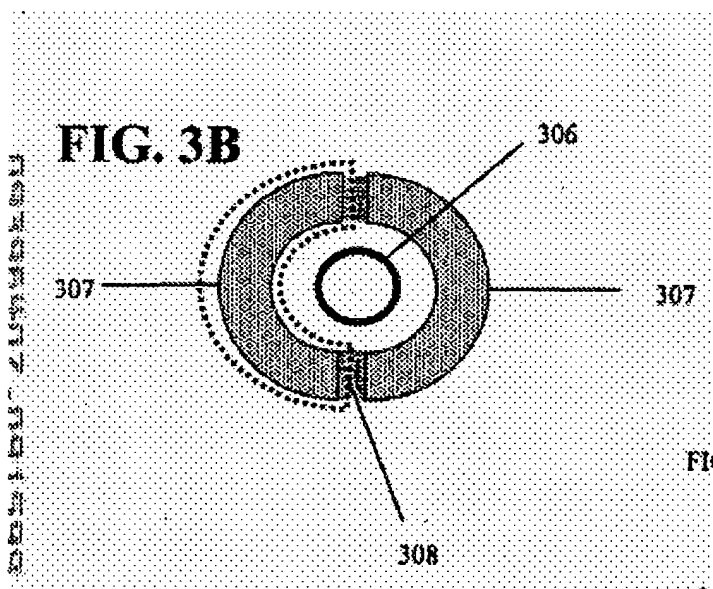
Armbruster teaches that the “recording magnetic head 186 ... is to be swept over the drying ink 181 and provide a characteristic magnetic pattern therein” at column 33, line 59.

Applicant discloses that the magnetic field created by the magnetic ink write head 203 interacts with the magnetic particles of the deposited magnetic ink, and

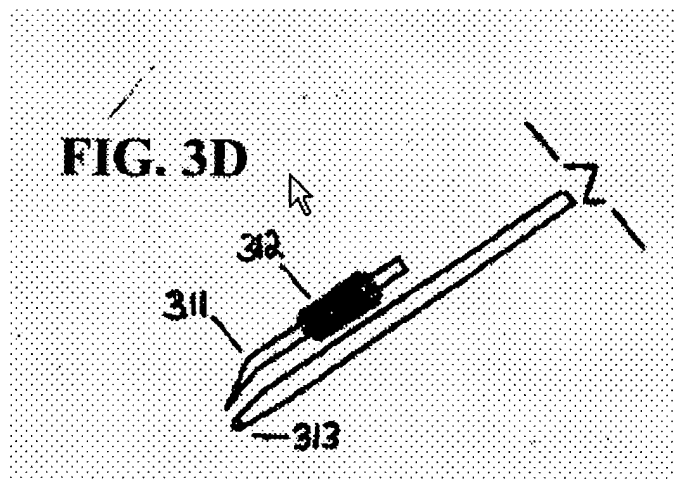
Armbruster discloses that “as the recording instrument deposits magnetizable ink in a visual and optical recognizable shape, a recording head travels over the same ink and treats it magnetically” at column 33, lines 20-30

The manner of magnetizing the ink as disclosed by the applicant is the same as that taught by Armbruster. Therefore, the applicant's claims cannot be construed as meaning anything different than what is disclosed.

Furthermore, applicant even depicts a magnetic write head that is similar in configuration to that of Armbruster, in figure 3B as follows:



Here, numeral 306 is the magnetic ink, numeral 307 is the iron core of the write head, and numeral 308 is the coil. This is exactly the same arrangement used by Armbruster in figure 26a. Furthermore, the applicant discloses an embodiment where the magnetic recording head is external to the pen, as depicted in applicant's figure 3D as follows:



This type of configuration is also taught by Armbruster at column 34, lines 15-20 as follows:

Although in FIG. 26a, the recording heads 185 and 186 are shown as attached to the recording instrument 191, it will be realized that they may be separately mounted and arranged to operate independently of said instrument if it is desired to provide more room and more drying space between the formation of an ink character and the magnetic treatment of it.

Therefore, given that the disclosed physical configuration of the applicant's pen is fundamentally the same as Armbruster's embodiment of figure 26a, and given that the claims in question are much broader than the applicant's disclosed configuration, Armbruster anticipates

Art Unit: 2621

the concept of “applying a magnetic field to the ink as it is applied to the surface as recited in each of the pending claims” at page 6, bottom paragraph of applicant’s response.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6, 12, 13, 15, 16, 17, 18, 24, 25, 26, 27, 28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Armbruster (US 3,376,551 A).

Armbruster Embodiment of Figure 26

Regarding claim 24 specifically, Armbruster discloses a method of storing information (figure 26), comprising:

applying magnetic ink on a surface (figure 26, numeral 178; “ink 176 carries magnetizable or magnetic particles ... of an elongated acicular forms” at column 32, line 73);
and

applying a varying magnetic flux to the magnetic ink (referring to figure 26, the ball point at numeral 174 has N and S poles and as the letter is written, the poles rotate in accord with the

Art Unit: 2621

“different degrees of intensity, speed and direction” of the writing) to store information in said magnetic ink (“deposits ink in a distinctive magnetic pattern which is additional to the distinctive optical pattern” at column 33, line 3; “these magnetic patterns are as distinctive as fingerprints for the identification of persons writing, since all strokes are made with different degrees of intensity, speed and direction and, thus have characteristic patterns which may be picked up and analyzed by one or more magnetic recording heads 179” at column 33, lines 11-15) as it is applied to the surface (as depicted in figure 26, the ink 176 is magnetized ball 174 as the ink is being deposited on the surface during writing; the magnetic pattern of the ink is dependent upon how the ball rotates during writing; that is, the ink is magnetized by the ball, which is a magnet, as the ink is being applied to the surface; see “is deposited by stroking the pen end in the usual fashion, it will be seen that as the ball 174 gyrates, it deposits ink in a distinctive magnetic pattern” at column 33, lines 1-3; while the ink is “magnetizable” at column 32, line 72, it does not become magnetized until it passes over the ball and onto the writing surface).

Regarding claim 26, the information is security data (“these magnetic patterns are as distinctive as fingerprints for the identification of persons writing” at column 33, line 12).

Armbruster Embodiment of Figure 26a

Regarding claim 6, Armbruster discloses a magnetic ink encoding stylus (figure 26a, numeral 191), comprising:

Art Unit: 2621

a penpoint adapted to apply magnetic ink to a surface (figure 26a, numeral 180 applies magnetic ink 181 to the surface figure 26a, numeral 181; “magnetic ink” at column 33, line 19); and

a magnetic ink write head (figure 26a, numeral 186; “recording magnetic head 186” at column 33, line 57), coupled to the penpoint (as depicted in figure 26a; “recording heads 185 and 186 are shown as attached to the recording instrument 191” at column 34, line 16) and to apply a varying magnetic flux to the magnetic ink as it is applied by the penpoint to the surface (“flux” at column 9, line 2; “... carries its impulses down into the coil of the recording magnetic head 186 which is to be swept over the drying ink 181 and provide a characteristic magnetic pattern therein which is either representative of or related to the character decoded” at column 33, line 60; also see “magnetically coded to be related to, and only optionally identical with, the character optically inscribed by the recording instrument”, “as the recording instrument deposits magnetizable ink in a visual and optical recognizable shape, a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape” and “a number may be written in the Arabic notation but coded magnetically in a binary form” at column 33, lines 20-30).

Regarding claim 24, Armbruster discloses a method of storing information (figure 26a), comprising:

applying magnetic ink on a surface (figure 26a, numeral 181; “ink deposited” at column 8, line 49); and

Art Unit: 2621

applying a varying magnetic flux to the magnetic ink (“flux across the magnetic pen head” at column 9, line 2) to store information in said magnetic ink (“magnetically coded to be related to, and only optionally identical with, the character optically inscribed by the recording instrument”, “as the recording instrument deposits magnetizable ink in a visual and optical recognizable shape, a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape” and “a number may be written in the Arabic notation but coded magnetically in a binary form” at column 33, lines 20-30) as the ink is applied to the surface (as depicted in figure 6a, as the ink 181 is exiting the pen and deposited onto the writing surface during writing, the write head 186 is magnetizing the ink; thus, the ink is magnetized as it is applied to the surface; this is directly analogous to how the applicant’s own disclosed invention operates, as depicted for example in figures 3).

Regarding claim 12, the magnetic ink write head has a plurality of pole faces (“slit in a magnetic head ... which are the pole pieces of a magnetic head” at column 8, line 62; see figure 26a, numeral 186).

Regarding claim 13, a signal generator is coupled to the write head (e.g., figure 26a, numerals 189 and 188).

Regarding claim 15, the signal is digital (“binary form” at column 33, line 29).

Regarding claim 17, encoding electronics are coupled to the head (“coded” at column 33, line 26; e.g., figure 26a, numeral 189 is responsible for receiving a signal from coil 187, decoding that signal (e.g., the determine the letter written), and then encoding that data in a binary form to be sent to record head 186; see column 8, lines 45-70).

Art Unit: 2621

Regarding claim 18, coil 187 is in effect a direction sensor, in that it picks up the changing magnetic field of the ball point magnet 180 in a way that the decoder 189 can determine what is being written, and then record that information which is “representative of or related to the character decoded” at column 33, line 60.

Regarding claim 25, the stored information signal is digital (“binary form” at column 33, line 29).

Regarding claim 27, a varying magnetic field corresponding to the information signal is generated and intersects the applied magnetic ink (“shortly after the time the ink is deposited there is formed thereon oriented and magnetic recording areas of polarized particles as controlled by the coded feedback of the waveform generator” at column 8, line 70; “the flux across the magnet pen head” at column 9, line 2).

Regarding claims 16 and 28, the information signal is generated responsive to sensing stylus pressure. That is, the information signal 26a, the information signal originates from coil 187 which generates information only when the ball point 180 (which is magnetized) is in motion. The ball point on the other hand cannot be in motion unless pressure is applied to it in the form of writing. Thus, indirectly, the information signal is generated by coil 187 is in response to sensed pressure.

Regarding claim 30, the information signal is received from a computer (the information signal is received from a “decoder” as described above; see “sent first through a decoder for interpreting the time for decimal or binary representation ...” at column 35, line 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 24, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lemelson (US 5,563,401 A) and Armbruster (US 3,376,551 A).

The Lemelson Embodiment of Figure 3 is relied upon herein:

Regarding claims 24 and 27, Lemelson discloses:

applying magnetic ink on a surface (“printed with or otherwise formed of magnetic ink” at column 2, line 59); and

recording and storing information in the magnetic ink (“magnetically recorded longitudinally along or one or more of the bars 30 ... are a plurality of code recordings 35 to be read, as above, by a magnetic puck-up scanned parallel to and along the bars” at column 2, line 61; “auxiliary information” at column 1, line 40).

Lemelson does not teach “applying a varying magnetic flux to the ink” in order to “record” the auxiliary information.

Armbruster discloses the entirety of claim 24 as described in the 102 rejections above, including applying a varying magnetic flux to the magnetic ink (“flux across the magnetic pen

Art Unit: 2621

head” at column 9, line 2) to store information in said magnetic ink (“magnetically coded to be related to, and only optionally identical with, the character optically inscribed by the recording instrument”, “as the recording instrument deposits magnetizable ink in a visual and optical recognizable shape, a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape” and “a number may be written in the Arabic notation but coded magnetically in a binary form” at column 33, lines 20-30).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to apply a varying magnetic flux to the magnetic bars of Lemelson as taught by Armbruster, in order to stored magnetically program the auxiliary information of Lemelson into the bars using an extremely simple and cost efficient device, such as the recording head of Armbruster as depicted in figure 26a.

Regarding claim 29, Lemelson does not teach any specific type of “auxiliary information” can be stored in the magnetic ink. Lemelson appears to leave this option open to one skilled in the art, and to include any type of information desired.

Armbruster discloses the storage of auxiliary information including a timing signal (“superimpose or accompany compatible magnetically derived signals of time upon or alongside related character code signals” at column 34, line 29; refer to figures 27 and 28).

It would have been obvious at the time the invention was made to one of ordinary skill in the at to superimpose timing signals on the magnetic ink lines of Lemelson as taught by Armbruster, because “time is very important” (Armbruster) to business transactions. For

Art Unit: 2621

example, this combination provides a way to encode a time of purchase of an item possessing the Lemelson barcode to assist the vendor in deterring fraud related to returned purchases after a warranty or return period has expired.

7. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Armbruster (US 3,376,551 A) and Zacaroli (US 3,700,828 A)

Regarding claim 7, Armbruster discloses:

a magnetic ink encoding stylus (figure 26a), comprising:

a penpoint adapted (figure 26a, numeral 180) to apply magnetic ink (numeral 181) to a surface (the surface show in figure 26a); and

a magnetic ink write head (figure 26a, numeral 186), coupled to the penpoint (“recording heads 185 and 186 are shown as attached to the recording instrument 191” at column 34, line 16) and adapted to apply varying magnetic flux to the magnetic ink as it is applied by the penpoint to the surface (“flux” at column 9, line 2; “... carries its impulses down into the coil of the recording magnetic head 186 which is to be swept over the drying ink 181 and provide a characteristic magnetic pattern therein which is either representative of or related to the character decoded” at column 33, line 60; also see “magnetically coded to be related to, and only optionally identical with, the character optically inscribed by the recording instrument”, “as the recording instrument deposits magnetizable ink in a visual and optical recognizable shape, a recording head travels over the same ink and treats it magnetically to be either similarly coded or coded in a manner merely related to the optical shape” and “a number may be written in the Arabic notation but coded magnetically in a binary form” at column 33, lines 20-30),

Art Unit: 2621

wherein the ink write head includes a magnetic field generator (i.e., as described immediately above, the write head 186 includes a coils, as depicted, which generates the magnetic field that passes across the gap or slit in the head).

Armbruster does not explicitly disclose a “magnetic shield”.

However, it is apparent from figure 26a, and its corresponding description in the Armbruster discloses as described above, that as the ball point 180 (which is a magnet) is in motion, coil 187 picks up the signal, converts it to an electrical signal, and delivers it to the decode module 189. The decode module interprets the signal, and then delivers a coded digital signal back down to the head coil 186. It is well known that coils produce electrical and magnetic fields themselves which can interact with each other when in close proximity.

Zacaroli discloses a magnetic shield that prevents cross-talk between a read and write head of a recording device (“In a sense the present invention contemplates the provision of a magnetic tape recording head including longitudinally spaced read and write electromagnetic transducers, each including a core of magnetic material having a gapped front face and a winding, the improvement comprising a crosstalk reducing shield of a magnetic material ...” at column 2, line 25).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the pen of Armbruster with a magnetic shield between the read coil 187 and the write head coil in 186 as taught by Zarcaroli, to prevent unwanted electrical and magnetic interferences between the two, thus ensure that the write head 186 accurately imparts the desired code to the ink 181 (“a sharp reduction in crosstalk” at column 2, line 36).

Art Unit: 2621

Regarding claims 8 and 9, the field generator includes a wire coil (figure 26a, numeral 186; see the schematic depiction of a coil).

Regarding claim 10, the Armbruster's head comprises a "slit in a magnetic head ... which are pole pieces of a magnetic head" at column 8, line 63. A record head of the type described by Armbruster directs a magnetic field between the two pole pieces to the magnetic media (i.e., the ink) as depicted in figure 26a. Thus, the record head is a magnetic field director.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Armbruster (US 3,376,551 A) and Zacaroli (US 3,700,828 A) as applied to claim 10 above, and further in combination with Paine et al. (US 3,566,045 A).

While Armbruster discloses a magnetic field director (i.e, the tape head of figure 26a, numeral 186), Armbruster does not disclosed the core material as being "iron core element".

Paine teaches a magnetic record head comprising an iron core (figures 1 and 2; "This invention relates to a new magnetic recording head having a greatly extended lifespan. More particularly, this invention is directed to a magnetic recording head composed of a ferrite core coated by a thin film of Alfesil" at column 1, line 10).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize an iron core record head as taught by Paine, as the record head material required by Armbruster, in order to provide a "greatly extended lifespan" (Paine, column 1, line 10).

Art Unit: 2621

9. Claim 14 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable Armbruster (US 3,376,551 A).

Regarding claim 14, while Armbruster discloses a signal generator in the embodiment of figure 26a (i.e., numerals 188 and 189), Armbruster does not disclose the signal generator including an analog timing signal generator.

In the embodiment of figures 27 and 28, Armbruster teaches an analog timing signal generator (numeral 193; “time piece 193 ... output signals representing hour and minute intervals” at column 34, line 40).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to include, as part of the signal generator of the figure 26a embodiment, an analog timing signal generator of the figure 27 embodiment, so that time can “be recorded relative to written matter” (Armbruster column 34, line 24). One would be motivated to make this modification based on the following statement of Armbruster at column 34, line 26:

“In many business transactions such as the ordering of stock or placing of bids, the element of time is very important and in the present instance the intention is to superimpose or accompany compatible magnetically derived signals of time upon or alongside related character code signals ...”

The limitations of claim 29 is met by this combination as well.

10. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Armbruster (US 3,376,551 A) and Infosino (US 6,715,679 B1).

Regarding claim 19,

while Armbruster discloses a write head 186 in figure 26a, Armbruster does not teach a port adapted to be coupled to an external computer bus and connected to the write head.

Infosino discloses a system in the same field of writing information onto a magnetic material (“reader/writer” at column 6, line 54; see figures 5-7) comprising a write head (numeral 706; “magnetic read/write head” at column 6, line 65), wherein Infosino teaches a port adapted to be coupled to an external computer bus and connected to the write head (figures 5 and 7, numeral 205; “... interface 205 to which a communications cable may be connected, for communicating with another device such as a computer, and/or for connecting the universal reader/writer 200 directly to a network” at column 5, line 5; “an interface 205 for receiving/sending data external from/to the universal reader/writer 200 (for example, for communicating with a computer and/or network)” at column 6, line 56).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the magnetic writing device of Armbruster (i.e., figure 26a) with a port for external connection of the write head to a computer as taught by Infosino, in order to allow for:

“communicating with another device such as a computer, and/or for connecting ... directly to a network” (Infosino at column 5, line 5),

and so that a “personal computer 650 may be used for data entry, data display, control of the [writing], and/or security verification” (Infosino at column 6, line 53),

thereby expanding the capabilities of Armbruster’s device by facilitating external control over what is magnetically recorded, whereby a user may control the pen from the computer which has greater processing capabilities and higher speed, and the ability to be programmed and/or

Art Unit: 2621

reprogrammed in order to facilitate new types of auxiliary information that a user may wish to record.

Regarding claim 20,

Armbruster discloses a magnetic ink encoding stylus having a magnetic ink write head as described fully above with respect to figure 26a.

Armbruster does not disclose:

A computer including a processor, a memory coupled to the processor, and an external bust coupled to the processor, and

A port coupled to the magnetic ink write head and to the external bus.

Infosino discloses Infosino discloses a system in the same field of writing information onto a magnetic material (“reader/writer” at column 6, line 54; see figures 5-7) comprising a write head (numeral 706; “magnetic read/write head” at column 6, line 65), wherein Infosino teaches:

a computer including a processor, a memory coupled to the processor, and an external bust coupled to the processor (figure 5, numeral 500; “personal computer” at column 6, line 31), and

a port coupled to the magnetic ink write head and to the external bus (figures 5 and 7, numeral 205; figures 5 and 7, numeral 205; “... interface 205 to which a communications cable may be connected, for communicating with another device such as a computer, and/or for connecting the universal reader/writer 200 directly to a network” at column 5, line 5; “an

Art Unit: 2621

interface 205 for receiving/sending data external from/to the universal reader/writer 200 (for example, for communicating with a computer and/or network)” at column 6, line 56).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the magnetic writing device of Armbruster (i.e., figure 26a) with a port for external connection of the write head to a computer as taught by Infosino, in order to allow for:

“communicating with another device such as a computer, and/or for connecting ... directly to a network” (Infosino at column 5, line 5),

and so that a “personal computer 650 may be used for data entry, data display, control of the [writing], and/or security verification” (Infosino at column 6, line 53), thereby expanding the capabilities of Armbruster’s device by facilitating external control over what is magnetically recorded, whereby a user may control the pen from the computer which has greater processing capabilities and higher speed, and the ability to be programmed and/or reprogrammed in order to facilitate new types of auxiliary information that a user may wish to record.

Regarding claims 21 and 22, Armbruster’s stylus includes a signal generator and encoding electronics (figure 26a, numeral 189 – as described in detail hereinabove).

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Armbruster (US 3,376,551 A) and Infosino (US 6,715,679 B1) as applied to claim 20 above, and further in combination with Howbrook (US 4,369,431 A).

The Armbruster and Infosino combination teaches a “biometric interface” to the computer at Infosino column 6, line 33, for purposes of “security verification” at Infosino

Art Unit: 2621

column 6, line 53. Infosino does not teach a graphics tablet and a handwriting recognition application.

Howbrook discloses a computer (figure 1, numeral 24) comprising a graphics tablet (figure 1, numeral 10) and a handwriting recognition application (“recognizing handwritten or drawn signs, particularly but not exclusively signatures” at column 1, line 6) coupled thereto (as in figure 1).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to employ, as the biometric interface required by Infosino, the graphics tablet and recognition application of Howbrook. One would be motivated to make such a modification because of the benefits espoused by Howbrook regarding his system:

“The present invention has the object of reducing the size of computer required especially with respect to the amount of storage needed and it is also believed that significant improvement in incorrect rejections and acceptances will be obtained with some embodiments of the invention” at Howbrook column 1, line 16.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2621

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Werner whose telephone number is 571-272-7401. The examiner can normally be reached on M-F, 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian Werner
Primary Examiner
Art Unit 2621
January 31, 2006



BRIAN WERNER
PRIMARY EXAMINER